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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,244	02/15/2002	Hiroyuki Nakano	501.41175X00	7857
20457	7590	01/12/2006	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			PADGETT, MARIANNE L	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,244

Applicant(s)

NAKANO ET AL.

Examiner

Marianne L. Padgett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 36-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 36-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 1-18 & 36-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

New claims 36-46 are noted to be virtually identical to already present claims 1-11 with the exception of claim one's limitation of "referring to a database storing predetermined relationships..." being rephrased to say "referring to a database means for storing predetermined relationships...", however the examiner can see no significant or real difference in these processes as stated as it is impossible to refer to the database without referring to what can be called a database means, with the sole exception that a database could be entirely in someone's memory, however this would have little significance with respect to data which is stored in a computer or by a computer which is expected for optical and spectroscopic data. For these reasons all rejections apply to claim 1 in its dependents also apply to claim 36 and its dependents. On page 14, in the remarks of the 10/19/2005 response, applicants discuss this new limitation as being a means plus function limitation, however the "means" is the database means, NOT the predetermined relationships, and applicants have failed to point out wherein this claim they define their "database means for" (although it would be reasonable to assume they're using a computer), hence the shoes of means plus function language is not seen to solve any of the previously discussed problems, which are reiterated below.

Claim 1, lines 13-17 now recites "a state of contamination of the inside wall", in lines 13-14, while the last line 17 now refers to multiple contamination states of unknown relationship to the current state of the chamber. Similarly, in lines 14 and 16 "a signal" and "signals" are now referred to. It is unclear what relationship or significance, if any these multiple signals in contamination states have to the chamber presently being used in processing, since there is no indication that the data was from any process related to the process presently being performed, i.e. it could be data from 5 or 10 years before and have absolutely no relationship to anything or contamination that may be present in the current

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use of the chamber. What is intended by such a broad scope of claimed signals in contamination states is unclear from the claims as written.

In claim 12, exactly what is meant by “a predetermined relationship of imaging...”, one with respect to the plasma and the other with respect to the inside wall in lines 15-16 and 19-20, respectively? The phrase’s use of “imaging” implies it has something to do with how the signal from the light is displayed, but that wouldn’t appear to be particularly relevant or significant. Does it have some non-idiomatic meaning? One relationship that the examiner would expect to be predetermined, would have been the position at which each optical unit is placed, or the positions it may be able to scan, so that it takes in data from predetermined part of the chamber for measuring the suspended material and wall contamination & can be said to have a predetermined relationship with whatever image will be produced from the data. If this is what is meant, it would have been expected to be done by competent works, as no one who wants meaningful data places their detectors randomly or indiscriminately. Note in claim 12, the repeated “an optical...” and “a predetermined...” as now written, have distinguishing modifiers.

In claim 13, due to the lack of any article showing antecedent basis, it is uncertain whether or not the “information...” (either lines 3 or 4) used for the controlling of the plasma is from that obtained from the optical unit of claim 12, line 16 or line 20. While the examiner suspects it is intended to be, the claim language as written does NOT necessitate it.

In claim 14 and 15, “the projection operation” and “the obtaining operation...” lack antecedence, because unlike claim 1, the term operation has never been introduced in claim 12. Consequently, “information” is not clearly related to the independent claims in claim 15. See claims 16 and 17 for similar problems. Also, in line 4 of 15, what does “the desired utilized” mean? It appears that in the amendment of 6/24/04 too many words have been deleted or something was forgotten to be added.

2. Claims 1-18 & 36-46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not

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described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The first paragraph of rejection as discussed in section 3 of the 7/19/2005 rejection is maintained, as the amendment of the claims has not removed the unsupported broad scope of the claims, but has in essence it worse with respect to independent claims 1 & 36 and their dependents. Providing three examples that may be encompassed by a very broad scope does not enable one to claim an infinitely broader scope than any of those examples, hence continues to lack appropriate enablement and must constitute New Matter.

Claim 12 has been amended to now require the use of two separate optical units the first arranged to detect light from a specific volume of the plasma all the second is arranged to detect light from positions on the inside wall all this clarifies the meaning in the claims admirably applicants have failed to recite where in their jumbo specification the support for these new limitations resides. Review of the figures did not provide obvious or necessary support for these two separate optical units/detectors. It would be appropriate for applicants to specifically point out support for these new limitations so that the examiner can avoid calling the new matter, that is providing they do not actually encompass some degree of new matter.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

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Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-18 & 36-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al (JP11-330053) and Bennett et al (JP03-147317 or US 5,367,139), in view of Katsuyama et al (JP 11-34196), as discussed in sections 5, 6 & 5 of 11/18/04, 11/5/03 & 7/19/05, respectively.

The amendments to claims 1 and the analogous language in claim 36 have not perceptively change the scope of the claims with respect to the rejection, hence arguments as previously presented are still considered effective.

While it may be assumed that applicants intend their first optical unit to be different than their second optical unit, it is noted that the claims do not necessitate them being different, although it is implied by the labeling of first and second. Note Nakano et al 's figure 5 shows scanning through various volumes of the chamber, as well as to the chamber walls, with the light reflected back there from and collected by a detector, which as previously discussed separates out various light components. The positions as shown in figure may be considered prudent for term and and they are also within various volumes, hence in combination with references as previously discussed claim 12 as amended does not appear to provide for a patently significant difference from this prior art to. Figures 5 and 6 Katsuyama et al appear to show multiple scanning in detecting units for each photo sensor 27 will absorb light depending on its angle of reflection or admission to thus adequately cover light scattered from various areas of the chamber walls and volumes therein hence is motivating for use of multiple optical units in order to effectively evaluate the chamber and processes there and, and would be applicable therefore to the primary reference in order to achieve like purposes.

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5. Applicant's arguments filed 10/19/2005 and discussed above have been fully considered but they are not persuasive.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

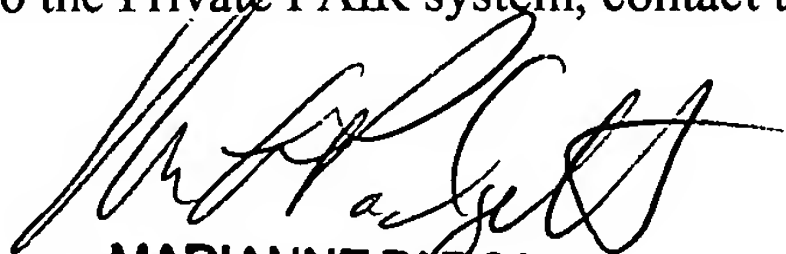
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on Monday-Friday from about 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached at (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

1/9/2006


MARIANNE PADGETT
PRIMARY EXAMINER

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